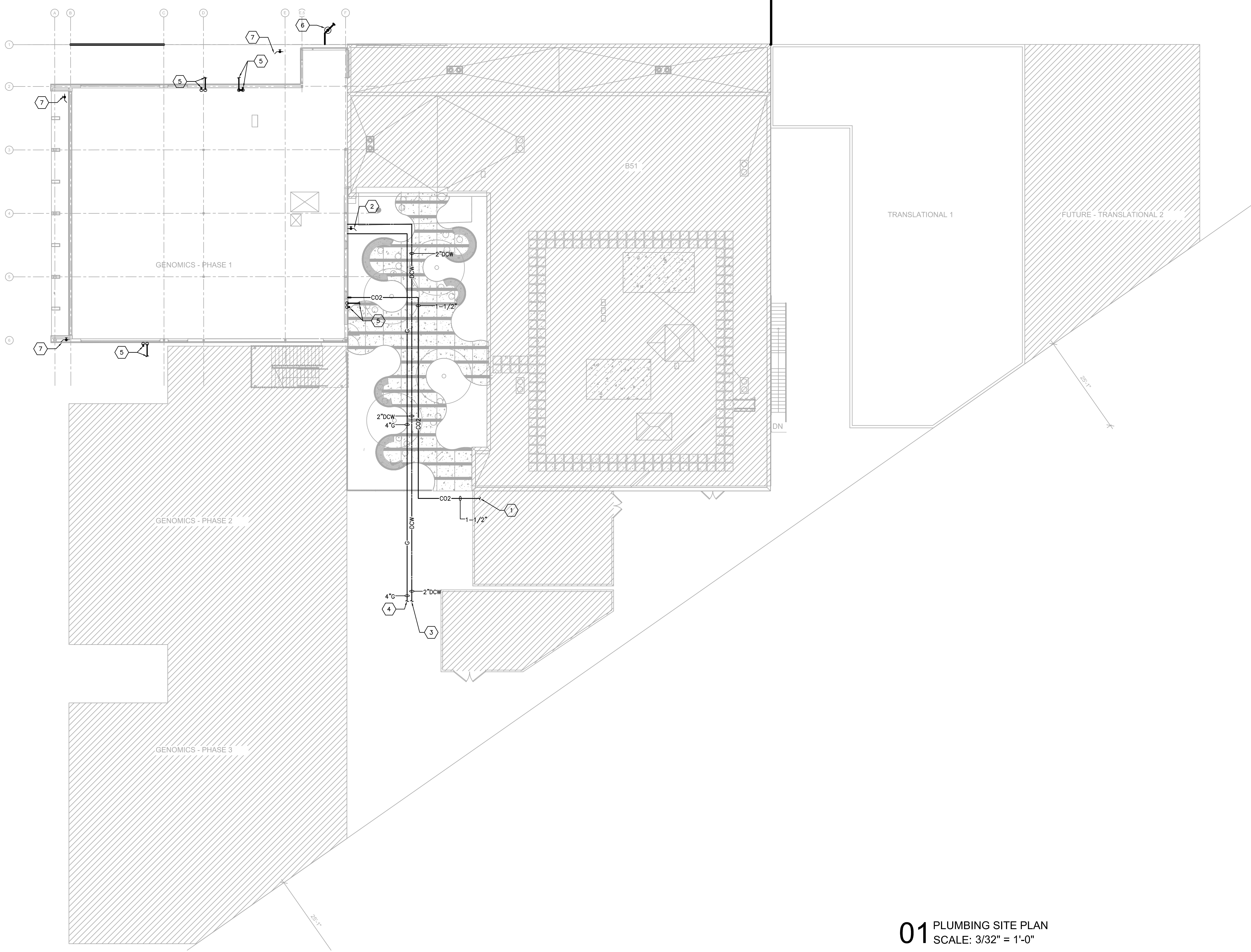


three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot
one sixteenth inch = one foot



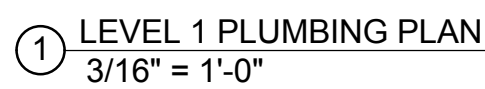
SHEET NOTES

1. -
- KEY NOTES**
- 1-1/2" CO2 INSULATED PIPE BELOW GRADE. ROUTE FROM CO2 TANKS AT MECHANICAL ENCLOSURE FOR BUILDING 51.
 - HOSE BIBB IN RECESSED BOX.
 - 2" DOMESTIC COLD WATER LINE BELOW GRADE. PROVIDE WATER METER IN METER BOX AT CONNECTION TO EXISTING WATER MAIN.
 - NEW 4" NATURAL GAS BELOW GRADE (2,200 CFH, 300 TDL). PROVIDE NEW METER AND REGULATOR NEAR STREET.
 - NEW 4" STORM DRAIN AND OVERFLOW DRAIN FROM ROOF. TERMINATE STORM DRAIN AT SWALE. TERMINATE OVERFLOW DRAIN MIN. OF 6" ABOVE GRADE AT FACE OF WALL TO PLANTING AREA.
 - NEW 4" S.S. WITH BUILDING CLEANOUT. ROUTE TO EXISTING SANITARY SEWER MANHOLE (REFER TO CIVIL DRAWINGS).
 - WASTE SAMPLING PORT. SEE DETAIL 1/P503.


01 PLUMBING SITE PLAN
SCALE: 3/32" = 1'-0"

FINAL BID DOCUMENTS

		CONSULTANTS:				ARCHITECT/ENGINEERS:		Drawing Title PLUMBING SITE PLAN			Project Title GENOMICS CLINICAL RESEARCH CENTER, PALO ALTO			Project Number 640-389		Office of Construction and Facilities Management	
		 SYSKA HENNESSY GROUP <small>A member company of SH Group, Inc.</small>		 HILLIARD ARCHITECTS, INC <i>251 Post Street, Suite 620 San Francisco, CA 94108-5017 Tel 415 989 6400, Fax 415 989 3056 www.HilliardArchitects.com</i>		Approved: Project Director			Location VAPAHCS - PALO ALTO			Building Number					
Revisions:									Date		Drawing Number PS100		Dwg. 1 of 1				



VA FORM 08-6231

CONSULTANTS:	
 <p>SYSKA HENNESSY GROUP</p> <p>A member company of SH Group, Inc.</p>	<p>Syska Hennessy Group, Inc. 425 California Street Suite 700 San Francisco, CA 94104 Tel: 415.288.9060 Fax: 415.835.0385 www.syska.com</p>


ARCHITECT/ENGINEERS:

HILLIARD ARCHITECTS, INC
251 Post Street, Suite 620
San Francisco, CA 94108-5017
Tel 415 989 6400, Fax 415 989 3056
www.HilliardArchitects.com

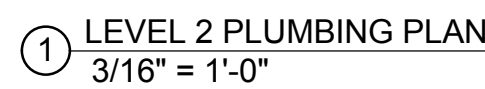
Drawing Title	PLUMBING FIRST FLOOR PLAN
Approved: Project Director	

Project Title			
GENOMICS CLINICAL RESEARCH CENTER, PALO ALTO			
Location			
VAPAHCS - PALO ALTO			
Date	Checked	Drawn	
06/20/2014	Checker	Author	

Office of
Construction
and Facilities
Management

 Department of
Veterans Affairs

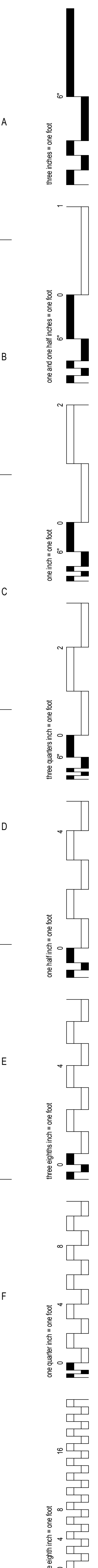
FINAL BID DOCUMENTS




SYSKA HENNESSY
GROUP
A member company of SH Group, Inc.

ESTABLISHED 1988 **HILLIARD**
 **ARCHITECTS**
GOING GREEN

Department of
Veterans Affairs



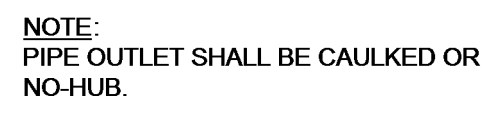
HILLIARD ARCHITECTS INC. COPYRIGHT

VA FORM 08-6231

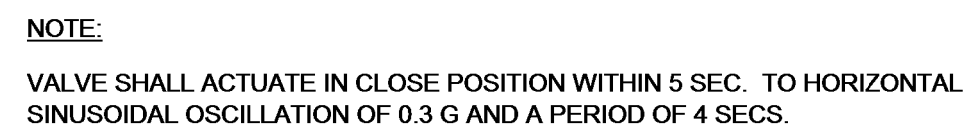


① P301
1/8" = 1'-0"

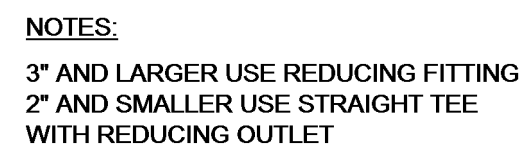
 Department of
Veterans Affairs



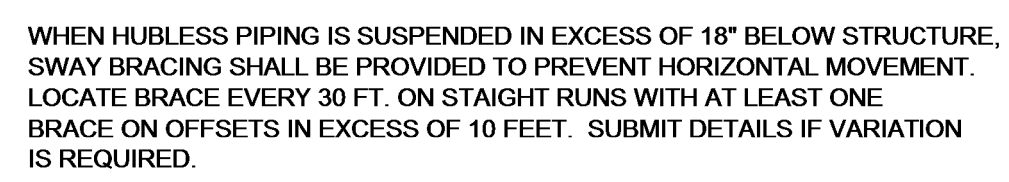
10



7



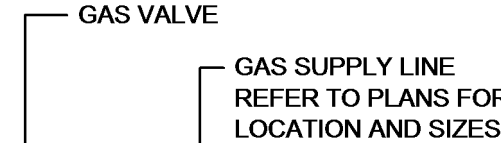
4



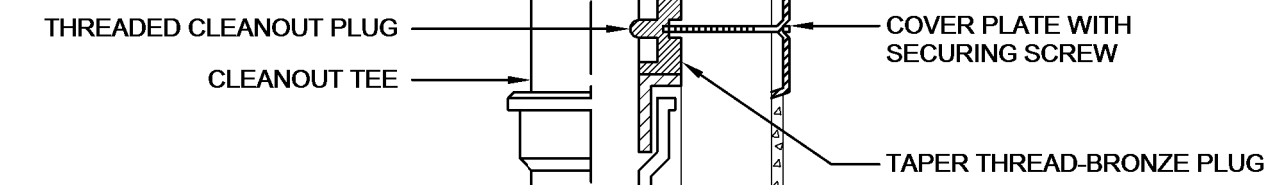
1



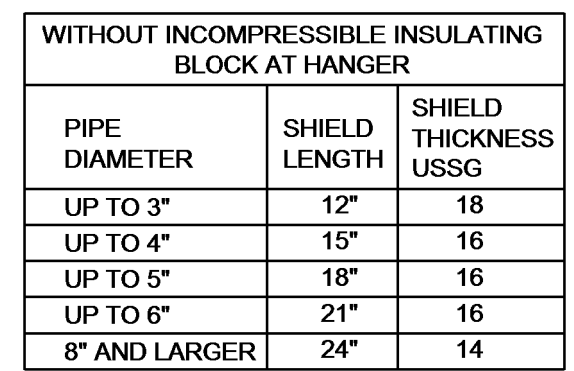
12



8

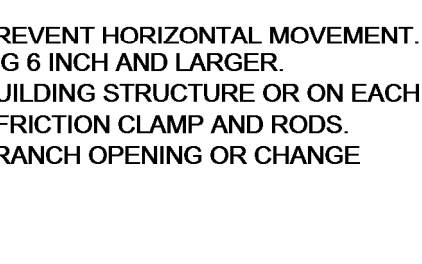


5

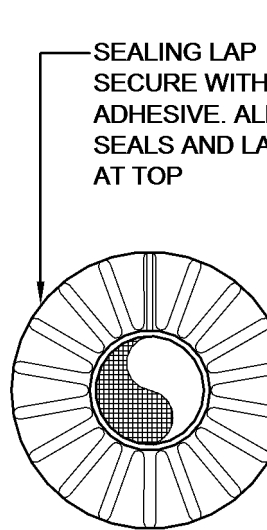


NOTE:
HANGER, ROD AND INSERT SHALL BE DIPPED IN RED OXIDE PRIMER PRIOR TO INSTALLATION.

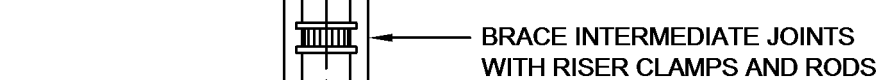
2



9



6



NOTE:
COLOR CODING AND SYMBOLS TO COMPLY WITH THE REQUIREMENTS OF SEFA RECOMMENDATION



4

①

1. ALL COMPONENTS IN CONTACT WITH PURE WATER ARE POLYPROPYLENE

5

②

3

Department of
Veterans Affairs

Revisions:	Date
------------	------

Syska Hennessy Group, Inc
425 California Street
Suite 700
San Francisco, CA 94104
Tel: 415.288.9060
Fax: 415.835.0385
www.syska.com

HILLIARD ARCHITECTS, INC
251 Post Street, Suite 620
San Francisco, CA 94108-5017
Tel 415 989 6400, Fax 415 989 3056
www.HilliardArchitects.com

Approved: Project Director

PIPE MATERIAL SCHEDULE

SERVICE	PIPE	FITTINGS	REMARKS
DOMESTIC WATER SYSTEM ABOVE GROUND 4" & SMALLER	SEAMLESS COPPER TUBING, TYPE L, DRAWN TEMPER, ASTM B88	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16.23, ANSI B16.18	JOINTS: APPROVED LEAD FREE SOLDER OR BRAZED LEAD FREE. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.
NON-POTABLE WATER SYSTEM	SEAMLESS COPPER TUBING, TYPE L, DRAWN TEMPER, ASTM B88	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16.23, ANSI B16.18	JOINTS: 95-5 (TIN AND ANTIMONY) SOLDER. PROVIDE APPROVED PIPE LABEL STATING "NON-POTABLE WATER". SEE 8-1/2"x11" BOOK SPECIFICATIONS.
SOIL, WASTE, AND VENT ABOVE GROUND 2" & LARGER	SERVICE WEIGHT CAST IRON HUBLESS SOIL PIPE CONFORM TO CISPI 301, NSF LISTED	SERVICE WEIGHT CAST IRON NO-HUB TYPE SOIL FITTINGS CISPI 301 WITH NEOPRENE GASKET AND STAINLESS STEEL BANDS AND SHIELD, NO HUB COUPLINGS CISPI 310.	
SOIL, WASTE, AND VENT UNDERGROUND 2" & LARGER	EXTRA HEAVY CAST IRON HUB AND SPIGOT SOIL PIPE CONFORMING TO ASTM A-74, NSF LISTED	STANDARD WT. CAST IRON HUB AND SPIGOT FITTINGS CONFORMING TO ASTM A-74.	JOINTS: COMPRESSION GASKETS CONFORMING TO ASTM C564. SEE NOTE-3 BELOW FOR UNDERGROUND PIPING.
CONDENSATE INDIRECT DRAINAGE	SEAMLESS COPPER TUBING, TYPE M, HARD DRAWN TEMPER, ASTM B88 W/ INSULATION SIMILAR TO CEC SEC. 123, TABLE 1-G.	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16.23, ANSI B16.18	JOINTS: 95-5 (TIN AND ANTIMONY) SOLDER.
GAS PIPING LOW PRESSURE 7"W.C. TO 14"W.C.	STANDARD WEIGHT SCHEDULE 40 BLACK STEEL FOR ABOVE GROUND	STANDARD WEIGHT 150 LBS. W.O.G. MALLEABLE IRON, WELDED FITTINGS FOR ABOVE GROUND	
LABORATORY VACUUM	SEAMLESS COPPER TUBING, TYPE K, HARD TEMPER, ASTM B88	WROUGHT COPPER, SILVER BRAZED-JOINT WITH CONTINUOUS NITROGEN PURGE, ANSIIAWS A5.8	
CARBON DIOXIDE	SEAMLESS COPPER TUBING, TYPE K, HARD TEMPER, ASTM B88	WROUGHT COPPER, SILVER BRAZED-JOINT WITH CONTINUOUS NITROGEN PURGE, ANSIIAWS A5.8	
RO/DI WATER	POLYPROPYLENE SCH. 80 PIPING CONFORMING TO ASTM D4101	POLYPROPYLENE SOCKET FUSION JOINTS.	

NOTES:
ALL PIPES AND FITTINGS SHALL BE LISTED FOR ITS INTENDED USE AND SHALL COMPLY WITH CPC AND THE REQUIREMENTS OF THE CITY OF SAN FRANCISCO
1. ALL DOMESTIC WATER PIPE, FITTING, VALVE, SOLDER AND FLUX, FIXTURE AND FAUCET INTENDED TO CONVEY OR DISPENSE WATER FOR HUMAN CONSUMPTION THROUGH DRINKING OR COOKING (WITH LAVATORY, SINK, DRINKING FOUNTAIN, WATER DISPENSER, ETC.) SHALL MEET THE CALIFORNIA ASSEMBLY BILL AB 1953, NSF/ANSI STANDARD 61 ANNEX G, AND CALIFORNIA HEALTH SAFETY CODE SECTION 116875 (LEAD FREE) REQUIREMENTS.
2. CONTRACTOR SHALL COMPLY WITH GEOTECHNICAL CONSULTANT OR CORROSION PROTECTION ENGINEER'S RECOMMENDATIONS TO ALL BURIED FERROUS PIPING'S CORROSION PROTECTION INCLUDING DOMESTIC WATER, FIRE WATER, GAS, SEWER, VENT, GREASE WASTE, AND STORM DRAIN. FOR ADDITIONAL REQUIREMENTS REFER TO 8-1/2" x 11 BOOK SPECIFICATIONS.

EQUIPMENT SCHEDULE

MARK	DESCRIPTION	PIPE SIZE (INCHES)				ELECTRICAL DATA		REMARKS	DETAIL
		CW	HW	W	V	POWER	VOLTAGE		
ET 1	EXPANSION TANK	3/4"	-	-	-	-	-	PROVIDE UPSTREAM OF INLET TO WATER HEATER. PROVIDE SEISMIC RESTRAINT	4 RP-402

BACKFLOW PREVENTOR SCHEDULE

MARK	DESCRIPTION	PIPE SIZE (INCHES)	REMARKS
		CW	
BFP-1	REDUCE PRESSURE BACKFLOW PREVENTOR	3/4	-
BFP-2	REDUCE PRESSURE BACKFLOW PREVENTOR	1	-
BFP-3	REDUCE PRESSURE BACKFLOW PREVENTOR	1-1/2	-

PLUMBING FIXTURE COUNT

	LV	LG	CYLINDER GAS INERT	WC C/W/D	LAVS HC/W/D	SINKS HC/W/D	LAB SINK HC/W/D	MOP SINKS HC/W/D	DI	ES/EW	FD	FS
			N2 CO2									
EXISTING FIXTURES	0	0	0	0	0	0	0	0	0	0	0	0
FIXTURES REMOVED	0	0	0	0	0	0	0	0	0	0	0	0
FIXTURES RELOCATED	0	0	0	0	0	0	0	0	0	0	0	0
NEW FIXTURES	84	72	11	20	0	0	15	0	15	10	1	8
PLUS/MINUS	84	72	11	20	0	0	15	0	15	10	1	8
TOTALS	84	72	11	20	0	0	15	0	15	10	1	8

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MINIMUM BRANCH PIPE SIZE					FIXTURE UNIT		WRIST BLADE HANDLE	SINGLE LEVER	GOOSENECK SPOUT	ELECTRICAL SENSOR	TRAP PRIMER	REMARKS
		HW (IN)	CW (IN)	W (IN)	TRAP (IN)	V (IN)	SAN	WATER						
FD-C	FLOOR DRAIN	-	1/2	2	2	2	2	-	-	-	-	-	YES	FLOOR DRAIN (SINK), 6" SQUARE OR ROUND STRAINER, LIGHT DUTY GRATE CAST IRON BODY
FD-O	FLOOR DRAIN	-	1/2	2 4	2 4	2	2 8	-	-	-	-	-	YES	FLOOR DRAIN (SINK), 12" SQUARE, 6"DEEP, DOME STRAINER, ACID RESISTANT INTERIOR
FD-R	FLOOR DRAIN	-	1/2	3	3	2	6	-	-	-	-	-	YES	FLOOR DRAIN (SINK), 8" SQUARE, 6"DEEP, DOME STRAINER, ACID RESISTANT INTERIOR
P-528	SINK	1/2	1/2	2	1 1/2	2	2	2	-	-	-	-	-	SINK - CRS. SINGLE COMPARTMENT, SELF RIMMING, W/ BACK FAUCET LEDGE, GOOSENECK FAUCET W/ WRIST-BLADE HANDLES.
P-510	SINK	1/2	1/2	2	1 1/2	2	2	2	X	-	X	X	-	SINK - CRS. SINGLE COMPARTMENT, SELF RIMMING, W/ BACK FAUCET LEDGE, GOOSENECK FAUCET, FOOT PEDALS AND ELECTRONIC FAUCET.
P-802	HOSE BIB	-	1/2	-	-	-	-	-	-	-	-	-	-	
P-707	EMERGENCY EYE WASH/ SHOWER	-	1-1/2	-	-	-	-	-	-	-	-	-	-	EYE/FACE WASH W/ STL.S. STL. BOWL AND COVER AND (4) SPRAY HEADS.
P-708	EMERGENCY STATION	-	3/4	-	-	-	-	-	-	-	-	-	-	WALL MOUNTED EMERGENCY EYE/FACE WASH WITH FOOT PEDAL CONTROL
P-807	REAGENT GRADE FAUCET	-	1/2	2	1 1/2	2	2	1	-	x	x	-	-	FAUCET - GOOSENECK DECK MOUNTED FAUCET W/ SERRATED HOSE END, PP INTERNALS AND INLET/OUTLET TUBES.

NOTES:
1. ALL FAUCETS FOR SINKS AND LAVATORIES SHALL BE PROVIDED WITH LAMINAR FLOW STREAM SPOUTS (NON-AERATING TYPE).
2. ALL LAVATORY AND SINK FAUCETS SHALL BE IN COMPLIANCE WITH THE AB-1953 LEAD-FREE REQUIREMENTS.

VACUUM PUMP SCHEDULE

TAG	EQUIPMENT	LOCATION	TYPE	RECEIVER SIZE (GALS)	QUANTITY ON STANDBY	EMERGENCY POWER	SYSTEM CAPACITY			MOTOR (EACH)						OPER. WEIGHT LBS	REMARKS
							VACUUM (IN. HG)	CAPACITY (GFM)	SYSTEM BTU/HR	H.P.	VOLT	PH	HZ	OPER RPM	DBA LEVEL		
LPV 1	LABORATORY VACUUM PUMP	ROOF	OIL-LESS CLAW	120	1	YES	24	38	10,994	5.4	480	3	60	1800	79	2,550	DUPLEX OIL-LESS CLAW, EXPANDABLE TO TRIPLEX, SINGLE POINT CONNECTIONS, NEMA 12 CONTROL PANEL, VARIABLE SPEED DRIVE, EXHAUST MUFFLER

GAS/LIQ. MANIFOLD SCHEDULE

MARK	DESCRIPTION	TYPE	LOCATION	EMERGENCY POWER	SYSTEM CAPACITY			ELECTRICAL				OPER. WEIGHT LBS	REMARKS	DETAIL
					SERVICE	PRESSURE (PSIG)	NO. DEWAR/ CYLINDERS	VOLT	PH	CY	AMPS			
LN 1	FULLY AUTOMATIC SWITCHOVER MANIFOLD FOR LIQ. CYLINDERS - TEMP- ACTUATED	LIQ/LIQ AUTO SWITCHOVER	C250, C143A	NO	LIQ N2	235	1 + 1	120	1	60	10	85	40	
CO2 1	FULLY AUTOMATIC SWITCHOVER MANIFOLD FOR GAS CYLINDERS	GAS AUTO SWITCHOVER	C248	NO	CO2	55	7 + 7	120	1	60	10	85	35	2 RP-402

GAS FIRED WATER HEATER SCHEDULE

TAG	LOCATION	STORAGE	RECOVERY G.P.H. AT 60 DEG-F RISE	DOMESTIC WATER		GAS INPUT (BTU/H)	DIMENSIONS (INCHES)			CONTROL CIRCUIT			FLUE DIA. IN	COMBUSTION AIR SQ. IN.	CONNECTION TO BMS (YES - NO)	OPERATING WEIGHT (LBS)	SPECIFICATION SECTION NO	REMARKS
				TEMP. IN	TEMP. OUT		DEPTH	WIDTH/DIA	HEIGHT	H.P.	VOLTAGE	PHASE						
SWH 1	ROOF	40	43	50	120	40,000	25" 635MM	23 1/4" 591MM	61 3/4" 1568MM	-	120	1	4	144	NO	500	223400	PROVIDE 7-DAY/24 HR TIMECLOCK INTERLOCKED WITH CIRC PUMP. PROVIDE CONDUIT FOR LOW VOLTAGE WIRING BETWEEN AQUASTAT, TIMECLOCK, CIRC PUMP.

NOTES:
1. HEATER SHALL BE SCAGMD APPROVED AND SHALL COMPLY WITH SEC TITLE 24.
2. PROVIDE WITH CIRCULATING PUMP.
3. PROVIDE WITH EXPANSION TANK.
4. PROVIDE SEISMIC BRACING.
5. PROVIDE WITH PRESSURE TEMPERATURE RELIEF VALVE.
6. THE TIMECLOCK WILL BE USED TO SET AND ADJUST THE STARTING OF THE CIRCULATION PUMP.

CIRCULATING PUMP SCHEDULE

TAG	EQUIPMENT	SERVICE	STAND BY	MOTOR DATA			CAPACITY (GPM)	RPM	FEET HEAD	LOCATION	OPERATING WEIGHT (LBS)	EMERGENCY POWER	REMARKS
				HP	VOLTS	PHASE							
CP 1	CIRCULATION PUMP	DOMESTIC HOT WATER	-	1/20	120	1	5	3500	8	ROOF	20	NO	INTEGRATED, REMOVABLE CHECK VALVE W/ QUICK CONNECT TERMINALS MAX.FLUID TEMP 150°F (65°C), MIN.FLUID TEMPERATURE 36°F (2°C)

FUME HOOD PLUMBING ROUGH-IN SCHEDULE

SYMBOL	FUME HOOD NAME	QTY.	SIZE	ROUGH-IN CONNECTIONS												REMARKS
				N2		LV		NG		ICW		CUP SINK		ARWP	ARVV	
				R	L	R	L	R	L	R	L	R	L			
FH-1	BENCH-TOP HOOD	4	4'	-	-	1	1	-	-	-	-	-	-	-	-	2
BSC-1	BIO-SAFETY HOODS	2	-	-	-	1	1	-	-	-	-	-	-	-	-	2
BSC-2	BIO-SAFETY HOODS	2	5'	-	-	1	1	-	-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. -
2. LABORATORY GASES AND LOW PIPING ARE PRE-PIPED WITHIN THE HOOD TO A POINT OF CONNECTION SPECIFIED BY THE MANUFACTURER.
3. -

FINAL BID DOCUMENTS

AMMENDMENT NO. 1
Revisions:

7/18/14
Date

CONSULTANTS:



SYSKA HENNESSY GROUP
A member company of SH Group, Inc.

Syska Hennessy Group, Inc.
425 California Street
Suite 700
San Francisco, CA 94104
Tel: 415.288.9060
Fax: 415.635.0385
www.syska.com

ARCHITECT/ENGINEERS:



HILLIARD ARCHITECTS
ESTABLISHED 1988
GOING GREEN

HILLIARD ARCHITECTS, INC
251 Post Street, Suite 620
San Francisco, CA 94108-5017
Tel 415 989 6400, Fax 415 989 3056
www.HilliardArchitects.com

Drawing Title
PLUMBING SCHEDULES

Approved: Project Director

Project Title
GENOMICS CLINICAL RESEARCH CENTER, PALO ALTO

Location
VAPAHCS - PALO ALTO

Date
06/20/2014

Checked
Checker

Drawn
Author

Project Number
640-389

Building Number
51

Drawing Number
PP501

Dwg. of

Office of Construction and Facilities Management

 **Department of Veterans Affairs**